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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/687,107 | 10/16/2003 | Lewis B. Aronson | 15436.51.1 | 7228 |
| 22913 | 7590 | 10/06/2006 | EXAMINER | |
| WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111 | | | TRAN, DZUNG D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2613 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,107

Applicant(s)

ARONSON ET AL.

Examiner

Dzung D. Tran

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Auracher et al. U.S. Patent no. 6,781,727.

Regarding claim 1, Auracher discloses in Figure 1b, an optical transmission or reception module comprises a matching circuit 7 (e.g., equivalent to flexible circuit) adapted to connect a driver circuit and an optical assembly, said matching circuit 7 (e.g., equivalent to flexible circuit) comprising:

a first transmission line (e.g., the line that containing components C2, R1, R2, or C*2, R*1, R*2) adapted to deliver a first signal from the driver circuit D to the optical assembly LD, said first transmission line comprising a first end adapted to connect to the driver circuit D and a second end adapted to connect to the optical assembly LD;
and

a second transmission line (e.g., the line that containing components L or L*) used to bias said first signal, said second transmission line being electrically connected to said second end of said first transmission line.

Regarding claim 2, Auracher discloses in Figure 1b, wherein said at least one first transmission line further comprises a matching impedance R1, R2, R*1, R*2.

Regarding claim 3, Auracher discloses in Figure 1b, wherein said at least one second transmission line (e.g., the line that containing components L or L*) is electrically connected to said at least one first transmission line between said matching impedance R1 and said optical assembly LD.

Regarding claim 4, Auracher discloses in Figure 1b, wherein said optical assembly comprises a laser diode LD.

Regarding claim 5, Auracher discloses in Figure 1b, wherein an end of said at least one second transmission line is electrically connected to a direct current source (e.g., source of bias current).

Regarding claim 6, Examiner take an official notice that the first signal (or modulated driving signal) is well recognized in the art as an alternating current signal.

Regarding claim 7, Auracher discloses in Figure 1b, an optical transmission or reception module comprising:

a first transmission line (e.g., the line that containing components C2, R1, R2, or C*2, R*1, R*2) comprising a first end and a second end, said first transmission line electrically connected at said first end to a means (e.g., laser driver D) for generating

modulated signals and electrically connected at said second end to a means(e.g., LD) for generating optical signals based upon said modulated signals; and

electrically connected to said second end of said first transmission line, means (e.g., the line that containing components L or L*) for biasing said modulated signals.

Regarding claim 8, Auracher discloses in Figure 1b, means for generating one or more modulated signals comprises a laser driver D.

Regarding claim 9, Auracher discloses in Figure 1b, wherein said means for generating optical signals comprises a laser diode LD.

Regarding claim 10, Auracher discloses in Figure 1b, a matching circuit 7 (e.g., equivalent to flexible circuit) incorporating said first transmission line and said second transmission line and electrically connecting said means (e.g., laser driver D) for generating modulated signals to said means (e.g., LD) for generating optical signals based upon said modulated signals.

Regarding claim 11, Auracher discloses in Figure 1b, a current source (e.g., the source that provide bias current I_{bias}), said current source configured to deliver a bias current to said means for generating optical signals.

Regarding claim 12, Auracher discloses in Figure 1b, wherein an end of said second transmission line is electrically connected to a direct current source (col. 6, lines 9-12).

Regarding claim 13, Auracher discloses in Figure 1b, an optical transmission or reception module comprising:

a driver circuit D adapted to deliver a signal to an optical assembly along a first transmission line (e.g., the line that containing components C2, R1, R2, or C*2, R*1, R*2), said first transmission line comprising a first end electrically connected to said driver circuit D and a second end electrically connected to said optically assembly LD;

a current source (e.g., the source that provide bias current I_{bias}) in communication with said optical assembly LD and adapted to provided a bias current to said optical assembly; and

a second transmission line (e.g., the line that containing components L or L*) electrically connecting said current source to said optical assembly, said second transmission line being connected to said second end of said first transmission line.

Regarding claim 14, Auracher discloses in Figure 1b, wherein said driver circuit is a laser driver circuit.

Regarding claims 15 and 16, Auracher discloses wherein said signal is delivered to said optical assembly at a rate of at least 10 Gigabits/second or at a rate of less than 10 Gigabits/second (col. 7, lines 60-62).

Regarding claim 17, Auracher discloses wherein said voltage source is a direct current source (col. 6, lines 9-12).

Regarding claim 18, Auracher discloses in Figure 1b wherein said first transmission line and said second transmission line are incorporated within a matching circuit 7 (e.g., equivalent to flexible circuit).

Regarding claim 19, Auracher discloses in Figure 1b, wherein said at least one first transmission line further comprises a matching impedance R1, R2, R*1, R*2.

Regarding claim 20, Auracher discloses in Figure 1b, wherein said at least one second transmission line (e.g., the line that containing components L or L*) is electrically connected to said at least one first transmission line between said matching impedance R1 and said optical assembly LD.

Regarding claim 21, Auracher discloses said at least one matching impedance is between 5 Ohm and 25 Ohm (col. 7, lines 7-37).

Regarding claim 22, Auracher discloses in Figure 1b, wherein said current source (e.g., the source that provide bias current I_{bias}) generates a bias current, said bias current flowing to said optical assembly without passing through said at least one matching impedance.

Regarding claim 23, Auracher discloses in Figure 1b, wherein said optical assembly comprises a laser diode LD.

Regarding claim 24, Auracher discloses wherein said second transmission line has a load of between 5 Ohm and 25 Ohm (col. 7, lines 7-37).

Regarding claim 25, Auracher discloses in Figure 1b, an optical transmission or reception module comprising:

a driver circuit D adapted to generate a modulated driver signal deliverable to an optical assembly LD;

a current source (e.g., the source that provide bias current I_{bias}) in communication with said optical assembly and adapted to provided a bias current for said optical assembly; and

a matching circuit 7' (e.g., equivalent to flexible circuit) electrically connecting at least two of said driver circuit D, D*, said direct current source (e.g., the source that provide bias current I_{bias}), and said optical assembly LD, said matching circuit 7' (e.g., equivalent to flexible circuit) comprises:

a first transmission line (e.g., the line that containing components C2, R1, R2, or C*2, R*1, R*2), electrically connected to said driver circuit D at a first end and to said optical assembly LD at a second end, said first transmission line being adapted to allow said modulated signal to be delivered to said optical assembly; and

a second transmission line (e.g., the line that containing components L or L*) electrically connected to said current source and to said optical assembly, said second transmission line being connected to said second end of said first transmission line.

Regarding claim 26, Auracher discloses in Figure 1b, wherein said first transmission line further comprises a matching impedance R1, R2, R*1, R*2.

Regarding claim 27, Auracher discloses in Figure 1b, wherein said second transmission line (e.g., the line that containing components L or L*) is connected to said first transmission line between said matching impedance R1 and said optical assembly LD.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Ishizuka et al. U.S. Patent no. 5,479,288. Light transmission module
- b. Lindblad U.S. Patent no. 7,010,233. Interface device for a fiberoptic communication network
- c. Jiang et al. U.S. Patent no. 6,947,672. High speed optical data links

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran
09/16/2006


DZUNG TRAN
PRIMARY PATENT EXAMINER